

REMARKS

The Office Action mailed August 17, 2010 has been reviewed and carefully considered. No new matter has been added.

Claims 1 and 25-37 have been amended. Claims 1-37 are pending.

The Applicants acknowledge the Examiner's indication that the IDS of December 12, 2005 has been fully considered.

Moreover, the Applicants acknowledge the Examiner's note on claim interpretation and assert that the Examiner's interpretation is indeed correct.

Claims 1-37 stand rejected under 35 U.S.C. 101 as being allegedly directed to non-statutory subject matter. Of Claims 1-37, Claims 1, 13, 25, and 37 are independent Claims. Claims 1 and 37 are directed to respective methods, Claim 13 is directed to a video encoder, and Claim 25 is directed to a digital videodisc.

In *Bilski v. Kappos*, 561 U.S. ____ (2010), the United States Supreme Court stated that the machine-or-transformation text is a "useful and important clue" and "investigative tool" for determining whether some claimed methods are statutory processes. According to the machine or transformation text, a process may be deemed statutory under 35 U.S.C. 101 if the process is (1) tied to another statutory category, or (2) transforms underlying subject matter to a different state or thing.

Accordingly, Claim 1 has been amended to now recite, *inter alia*, "In a video encoder, a video encoding method for selecting the mode of a current macroblock of an inter-coded frame" (emphasis added). Additionally, Claim 37 has been amended to now recite, *inter alia*, "In a video encoder, a video encoding method for selecting the encoding mode of a macroblock of an inter-coded frame" (emphasis added). Accordingly, method Claims 1 and 37 recite that such respective methods are performed in a video encoder and, hence, are tied to the statutory class of apparatus, thus satisfying the first prong of the machine or transformation test set forth mentioned in *Bilski*.

Regarding Claim 13, we respectfully point out that the same already recites and, hence, is explicitly directed to a "[a] video encoder". Moreover, we further respectfully point out that one of ordinary skill in this and related arts would readily recognize that a video encoder would necessarily involve hardware, essentially a machine having at the least, e.g., a processor(s) or similar processing element(s) and corresponding memory. While the Examiner improperly (given the context and

entirety of the disclosure in the instant application) focused on, e.g., a RAM, even assuming arguendo that the data stored therein is transitory, a RAM is nonetheless a hardware element and does not operate in a vacuum, but rather is implemented in conjunction with other hardware devices such as a processor and/or processing elements. Getting back to the context of the Applicants' disclosure which appears to have been missed by the Examiner, the sentence mentioned by the Examiner that discloses a RAM is as follows: "Moreover, explicit use of the term 'processor' or 'controller' should not be construed to refer exclusively to hardware capable of executing software, and may implicitly include, without limitation, digital signal processor ('DSP') hardware, read-only memory ('ROM') for storing software, random access memory ('RAM'), and non-volatile storage". As is evident from even a very cursory reading of the preceding sentence, hardware is implicated (involved) in all of the described scenarios as a processor, controller, DSP, ROM, RAM, and non-volatile storage are all hardware devices. However, as noted above, cooperative hardware elements generally considered to involve a machine having a processing element and corresponding memory are implicated by a video encoder as recited in Claim 13. Accordingly, Claim 13 is tied to the statutory class of apparatus, thus satisfying the first prong of the machine or transformation test set forth mentioned in *Bilski*.

Further regarding Claims 1, 37, and 13, we note that as per MPEP 2111.02(I), "[a]ny terminology in the preamble that limits the structure of the claimed invention must be treated as a claim limitation". Further, we note that page 6, lines 19-21 of the instant application disclose that "[t]he functions of the various elements shown in the figures may be provided through the use of dedicated hardware as well as hardware capable of executing software in association with appropriate software." Additionally, we note that page 12, lines 8-10 of the instant application disclose that "[i]t is to be understood that the principles of the present invention may be implemented in various forms of hardware, software, firmware, special purpose processors, or combinations thereof."

Regarding Claim 25, the same has been amended to now recite "A computer readable non-transitory medium encoded with signal data comprising a plurality of block transform coefficients" (emphasis added). As noted in a memo (hereinafter also referred to as the "Kappos' memo", a copy of which is enclosed herewith for the Examiner's convenience) dated January 26, 2010 from David J. Kappos, Under Secretary of Commerce for Intellectual Property and Director of the United States

Patent and Trademark Office, “[a] claim drawn to such a computer readable medium that covers both transitory and non-transitory embodiments may be amended to narrow the claim to cover only statutory embodiments to avoid a rejection under 35 U.S.C. 101 by adding the limitation ‘non-transitory’ to the claim.” The memo further states that “[s]uch an amendment would typically not raise the issue of new matter, even the specification is silent because the broadest reasonable interpretation relies on the ordinary and customary meaning that includes signals per se.”

Lastly, we note that while the Examiner has stated that “Applicant describes that manual operations are within the scope of the encoder”, the specific passage referred to by the Examiner is particularly directed to “switches”, again noting the aforementioned disclosures at page 6, lines 19-21 and page 12, lines 8-10 of the instant application, and further pointing out that an applicant may claim less than that disclosed in the corresponding patent application.

Accordingly, Claims 1, 13, 25, and 37 are believed to satisfy the requirements of 35 U.S.C. 101 for at least the preceding reasons. As Claims 2-12, 14-24, and 26-36 directly or indirectly depend from Claims 1, 13, and 25, respectively, Claims 2-12, 14-24, and 26-36 are believed to satisfy the requirements of 35 U.S.C. 101 for at least the reasons set forth above regarding Claims 1, 13, and 25 (noting that Claims 26-36 have been amended to now each recite a “computer readable non-transitory medium” (emphasis added)). Thus, reconsideration of the rejection is respectfully requested.

Claims 1-36 stand rejected under 35 U.S.C. 112, first paragraph, as allegedly failing to comply with the enablement requirement. The rejection is respectfully traversed.

At the onset, we note that the Examiner has contradicted himself. On page 2 of the pending Office Action, the Examiner states that “Applicant does not require that all element listed be part of the corresponding method/system, but only requires that ‘at least one of’ the elements be present.” Then, on page 4 of the pending Office Action, the Examiner states that “[w]hile all the recited steps are required to obtain the desired encoding, merely performing a single step is insufficient”. Hence, these two statements seem quite inconsistent with respect to each other. In any event, the Examiner was actually correct on page 2 of the pending Office Action when stating that all of the elements are NOT required, but rather “at least one of” the elements. Moreover, what bearing the preceding has in particular regarding 35 U.S.C. 112, first paragraph is not readily apparent.

The Examiner has further stated, with the following seemingly appropriate for a 35 U.S.C. 112, first paragraph rejection (as compared to the preceding reproduced statement from page 4), although certainly misplaced when applied to the pending claims of the instant application, that the “Applicant’s disclosure does not demonstrate to one of ordinary skill in the art how to perform video encoding for selecting the mode of a current macroblock of an inter-coded frame by performing only one of the recited steps. Thus, claim 1 is not enabled by Applicant’s disclosure” (Office Action, p. 4). The Applicants respectfully disagree.

For example, page 9, lines 26-27 of the instant application disclose the following: “[e]mbodiments provide for four technical categories, which can be jointly or independently applied”. Further to that end, page 9, line 28 to page 10, line 23 describe a first category pertaining to the first recited limitation in independent Claims 1, 13, and 25. Page 10, line 24 to page 11, line 16 describe a second category pertaining to the second recited limitation in Claims 1, 13, and 25. Page 11, lines 17-26 describe a third category pertaining to the third recited limitation in Claims 1, 13, and 25. Page 11, line 27 to page 12, line 5 describe a fourth category pertaining to the fourth recited limitation in Claims 1, 13, and 25. Hence, each of the recited four elements in Claims 1, 13, and 25 is described in sufficient detail in the aforementioned portions of the instant application to enable one of ordinary skill in the art to practice the claimed invention. Thus, Claims 1, 13, and 25 are believed to satisfy the requirements of 35 U.S.C. 112, first paragraph for at least the reasons set forth above. As Claims 2-12, 14-24, and 26-36 directly or indirectly depend from Claims 1, 13, and 25, respectively, Claims 2-12, 14-24, and 26-36 are believed to satisfy the requirements of 35 U.S.C. 112, first paragraph, for at least the reasons set forth above regarding Claims 1, 13, and 25. Thus, reconsideration of the rejection is respectfully requested.

Claims 25-36 stand rejected under 35 U.S.C. 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. As noted above, Claim 25 has been amended to now recite, *inter alia*, “A computer readable non-transitory medium encoded with signal data comprising a plurality of block transform coefficients”. Accordingly, Claim 25 is clearly directed to a computer readable non-transitory medium, namely a manufacture. Accordingly, Claim 25 is believed to be clear and definite in particularly pointing out and distinctly claiming the subject matter which applicant regards as the invention. As Claims 26-36 directly or indirectly depend from Claim 25, Claims 26-

36 are believed to satisfy the requirements of 35 U.S.C. 112, first paragraph, for at least the reasons set forth above regarding Claim 25. Thus, reconsideration of the rejection is respectfully requested.

Claims 1-4, 7-10, 12-16, 19-22, 24-28, 31-34, 36, and 37 stand rejected under 35 U.S.C. 102(a) as being anticipated by U.S. Patent Publication No. 2003/0099292 to Wang et al. (hereinafter "Wang"). Claims 5, 17, and 29 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Wang in view of U.S. Patent Publication No. 2003/0161402 to Horowitz (hereinafter "Horowitz"). Claims 6, 11, 18, 23, 30, and 35 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of U.S. Patent Publication No. 2002/0196854 to Kim (hereinafter "Kim").

The independent claims in the instant application are Claims 1, 13, 25, and 37.

It is respectfully asserted that none of the cited references, either taken singly or in combination, teach or suggest the following limitations of amended Claim 1:

- checking first modes for a subset of macroblock modes, selectively checking other modes in response to motion vector information of the checked first modes, and selecting the mode for the current macroblock in response to the checked modes;

- checking the macroblock mode of at least one neighboring macroblock, and selecting the mode for the current macroblock in response to the macroblock mode of the at least one checked neighboring macroblock;

- checking the cost of a subset of macroblock modes, further checking only intra-coded modes if the checked cost meets a preset criteria, and selecting the mode for the current macroblock in response to the checked modes; and

- adjusting an early-stopping threshold in response to checked macroblock modes, and selecting the mode for the current macroblock in response to the checked macroblock modes if the adjusted early-stopping threshold is met.

Moreover, it is respectfully asserted that none of the cited references, either taken singly or in combination, teach or suggest the following limitations of amended Claim 13:

first means for checking the first modes for a subset of macroblock modes, selectively checking other modes in response to motion vector information of the checked first modes, and selecting the mode for the current macroblock in response to the checked modes;

macroblock means for checking the macroblock mode of at least one neighboring macroblock, and selecting the mode for the current macroblock in response to the macroblock mode of the at least one checked neighboring macroblock;

subset means for checking the cost of a subset of macroblock modes, further checking only intra-coded modes if the checked cost meets a preset criteria, and selecting the mode for the current macroblock in response to the checked modes; and

stopping means for adjusting an early-stopping threshold in response to checked macroblock modes, and selecting the mode for the current macroblock in response to the checked macroblock modes if the adjusted early-stopping threshold is met.

Further, it is respectfully asserted that none of the cited references, either taken singly or in combination, teach or suggest the following limitations of amended Claim 25:

checking first modes for a subset of macroblock modes, selectively checking other modes in response to motion vector information of the checked first modes, and selecting the mode for the current macroblock in response to the checked modes;

checking the macroblock mode of at least one neighboring macroblock, and selecting the mode for the current macroblock in response to the macroblock mode of the at least one checked neighboring macroblock;

checking the cost of a subset of macroblock modes, further checking only intra-coded modes if the checked cost meets a preset criteria, and selecting the mode for the current macroblock in response to the checked modes; and

adjusting an early-stopping threshold in response to checked macroblock modes, and selecting the mode for the current macroblock in response to the checked macroblock modes if the adjusted early-stopping threshold is met.

Also, it is respectfully asserted that none of the cited references, either taken singly or in combination, teach or suggest the following limitations of amended Claim 37:

selecting a subset of macroblock modes for encoding;
comparing said subset of macroblock modes for coding efficiency; and
selecting a mode having favorable coding efficiency, responsive to said step of comparing modes.

For example, against the first element recited in Claims 1, 13, and 25, namely “checking first modes for a subset of macroblock modes, selectively checking other modes in response to motion vector information of the checked first modes, and selecting the mode for the current macroblock in response to the checked modes”, the Examiner cited the following:

checking first modes for a subset of macroblock modes (para. 57 of Wang - macroblocks each separately encoded infield or frame mode depending upon macroblock characteristics), selectively checking other modes in response to motion vector information of the checked first modes, and selecting the mode for the current macroblock in response to the checked modes (para. 76 of Wang - motion vector of the current block are determined and the mode selected based on the mode of the current block, the mode of the neighboring block, and either the field-based or frame-based motion vector of the neighboring block).

Paragraph [0057] of Wang is reproduced in its entirety as follows:

An embodiment of the present invention is that AFF coding can be performed on smaller portions of a picture. This small portion can be a

macroblock, a pair of macroblocks, or a group of macroblocks. Each macroblock, pair of macroblocks, or group of macroblocks or slice is encoded in frame mode or in field mode, regardless of how the other macroblocks in the picture are encoded. AFF coding in each of the three cases will be described in detail below.

Paragraph [0076] of Wang is reproduced in its entirety as follows:

The “selective method” can also be used to calculate the PMV for block E if the macroblock has been encoded using pair based AFF encoding or group based AFF encoding. In the selective method, a frame-based block has a frame-based motion vector pointing to a reference frame. The block is also assigned a field-based motion vector pointing to a reference field. The field-based motion vector is the frame-based motion vector of the block with the vertical motion vector component divided by two. The reference field number is the reference frame number multiplied by two. A field-based block has a field-based motion vector pointing to a reference field. The block is also assigned a frame-based motion vector pointing to a reference frame. The frame-based motion vector is the field based motion vector of the block with the vertical motion vector component multiplied by two. The reference frame number is the reference field number divided by two.

Initially, we note that paragraph [0056] of Wang discloses and describes “[f]ixed frame/field coding”. Paragraph [0057] of Wang simply discloses that adaptive frame/field (AFF) coding can be performed on smaller portions of a picture. Hence, while the first element recited in Claims 1, 13, and 25 involves “checking first modes for a subset of macroblock modes”, paragraph [0057] simply discloses that each macroblock, pair of macroblocks, or group of macroblocks or slice is encoded in frame mode or in field mode, and does not refer to checking macroblock modes, let alone less than all macroblock modes, i.e., a subset of macroblock modes, as explicitly recited in Claims 1, 13, and 25.

Further, we note that regarding the aforementioned “checking first modes for a subset of macroblock modes”, the first element further involves determining and/or otherwise obtaining motion vector information of the first checked modes, as other modes are selectively checked in response to the motion vector information of the checked first modes as essentially recited in Claims 1, 13, and 25. Clearly, paragraph [0057] is silent regarding the preceding, and was not cited regarding the motion vector information and the selective checking of the other modes in response to the motion vector information of the checked first modes.

However, referring to paragraph [0076] of Wang, the same is NOT directed to selectively checking other modes in response to the checked first modes as recited in Claims 1, 13, and 25. Rather, the same is solely directed to describing the “selective method [that] can also be used to calculate the PMV [prediction motion vector] for block E”, noting that paragraphs [0073], [0074], [0075], and [0087] describe alternate methods of calculating the PMV of a block.

Hence, Wang fails to teach or suggest the first element recited in Claims 1, 13, and 25.

Regarding the second element recited in Claims 1, 13, and 25, namely “checking the macroblock mode of at least one neighboring macroblock, and selecting the mode for the current macroblock in response to the macroblock mode of the at least one checked neighboring macroblock”, the Examiner cited the following:

checking the macroblock mode of at least one neighboring macroblock, and selecting the mode for the current macroblock in response to the macroblock mode of the at least one checked neighboring macroblock (para. 78-81 of Wang - field-based and frame-based motion vectors are determined and the mode selected for the current block based on the mode of the current block, the mode of the neighboring block, and either the field-based or frame-based motion vector of the neighboring block).

However, paragraphs [0079]-[0081] are directed to and disclose scenarios where the neighboring block is in field mode or frame mode. As is readily recognized by one of ordinary skill in this and related arts, neither field mode nor frame mode correspond to a macroblock mode. For example, according to the International Organization for Standardization/International

Electrotechnical Commission (ISO/IEC) Moving Picture Experts Group-4 (MPEG-4) Part 10 Advanced Video Coding (AVC) Standard/International Telecommunication Union, Telecommunication Sector (ITU-T) H.264 Recommendation (hereinafter the “MPEG-4 AVC Standard”), as represented by well-known document ISO/IEC 14496-10, a field is defined as follows: “An assembly of alternate rows of a frame. A frame is composed of two fields, a top field and a bottom field.” A frame is defined therein as follows: “A frame contains an array of luma samples and two corresponding arrays of chroma samples. A frame consists of two fields, a top field and a bottom field.” A macroblock is defined therein as follows: “A 16x16 block of luma samples and two corresponding blocks of chroma samples.” As is evident, as noted above, a macroblock mode does not correspond to either field mode or frame mode.

Hence, Wang fails to teach or suggest the second element recited in Claims 1, 13, and 25.

Regarding the third and fourth elements recited in Claims 1, 13, and 25, namely “checking the cost of a subset of macroblock modes, further checking only intra-coded modes if the checked cost meets a preset criteria, and selecting the mode for the current macroblock in response to the checked modes” and “adjusting an early-stopping threshold in response to checked macroblock modes, and selecting the mode for the current macroblock in response to the checked macroblock modes if the adjusted early-stopping threshold is met”, the Examiner cited the following:

checking the cost of a subset of macroblock modes, further checking only intra-coded modes if the checked cost meets a preset criteria, and selecting the mode for the current macroblock in response to the checked modes; and adjusting an early-stopping threshold in response to checked macroblock modes, and selecting the mode for the current macroblock in response to the checked macroblock modes if the adjusted early-stopping threshold is met (at least one of the steps is taught by Wang, thus claim 1 as recited is anticipated by Wang).

That is, the Examiner has cited NO portions of Wang against the third and fourth elements of Claims 1, 13, and 25, instead relying upon his deficient correlations to the first and second elements of Claims 1, 13, and 25. The Applicants respectfully note that no correlations were made between the third and fourth elements of Claims 1, 13, and 25 and

Wang because none exist, as Wang does not teach or suggest these elements of Claims 1, 13, and 25.

Thus, Wang does not teach or suggest all (or any, for that matter) of the above reproduced elements of Claims 1, 13, and 25. Moreover, the remaining references do not cure the deficiencies of Wang, and are silent regarding the same.

Hence, Claims 1, 13, and 25 are patentably distinct and non-obvious over the cited references for at least the preceding reasons.

Regarding Claim 37, it is respectfully asserted that none of the cited references, either taken singly or in combination, teach or suggest the following limitations of Claim 37:

selecting a subset of macroblock modes for encoding;
comparing said subset of macroblock modes for coding efficiency; and
selecting a mode having favorable coding efficiency, responsive to said
step of comparing modes.

Against the preceding limitations of Claim 37, the Examiner cited the following:

selecting a subset of macroblock modes for encoding (para. 58, line 1 to para. 59, line 4 of Wang); comparing said subset of macroblock modes for coding efficiency (para. 60, line 1 to para. 61, line 10 of Wang - Motion information is used for a single macroblock to determine if frame or field encoding is to be performed. The other possible blocks sizes are then decided upon based on the determination of frame or field mode.); and selecting a mode having favorable coding efficiency, responsive to said step of comparing modes (para. 62, line 1 to para. 63, line 5 of Wang - Macroblock size is determined based on the efficiency of using a particular macroblock size responsive to the determination of whether to use field or frame encoding.).

Hence, commencing with the recited limitations of “selecting a subset of macroblock modes for encoding”, the Examiner particularly cited paragraph [0058], line 1 to paragraph [0059], line 4 of

Wang. Paragraph [0058], line 1 to paragraph [0059] of Wang are reproduced in their entireties as follows:

In the first case, AFF coding is performed on a single macroblock. If the macroblock is to be encoded in frame mode, the two fields in the macroblock are encoded jointly. Once encoded as a frame, the macroblock can be further divided into the smaller blocks of FIGS. 3a-f use in the temporal prediction with motion compensation algorithm.

However, if the macroblock is to be encoded in field mode, the macroblock (500) is split into a top field (501) and a bottom field (502), as shown in FIG. 5. The two fields are then coded separately.

Hence, while the preceding describes encoding a macroblock, the same is done using field modes or frames modes, neither of which are macroblock modes as recited in Claim 37, let alone a subset of macroblock modes as recited in Claim 37. The differences between a field and frame versus a macroblock are described above with respect to the arguments set forth for Claims 1, 13, and 25.

In any event, Wang does not teach or suggest all the above reproduced limitations of Claims 1, 13, and 25. Moreover, it is respectfully asserted that the remaining references do not cure the deficiencies of Wang, and are silent regarding the same.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” MPEP §2131, citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

The failure of an asserted combination to teach or suggest each and every feature of a claim remains fatal to an obviousness rejection under 35 U.S.C. § 103. Section 2143.03 of the MPEP requires the "consideration" of every claim feature in an obviousness determination. To render a claim unpatentable, however, the Office must do more than merely "consider" each and every feature for this claim. Instead, the asserted combination of the patents must also teach or suggest *each and every claim feature*. See *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA

1974) (emphasis added) (to establish *prima facie* obviousness of a claimed invention, all the claim features must be taught or suggested by the prior art). Indeed, as the Board of Patent Appeal and Interferences has recently confirmed, a proper obviousness determination requires that an Examiner make "a searching comparison of the claimed invention - *including all its limitations* - with the teaching of the prior art." See *In re Wada and Murphy*, Appeal 2007-3733, citing *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis in original). "If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious" (MPEP §2143.03, citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)).

Accordingly, Claims 1, 13, 25, and 37 are patentably distinct and non-obvious over the cited references for at least the reasons set forth above.

Claims 2-12 directly or indirectly depend from Claim 1 and, thus, includes all the elements of Claim 1. Claims 14-24 directly or indirectly depend from Claim 13 and, thus, includes all the elements of Claim 13. Claims 26-36 directly or indirectly depend from Claim 25 and, thus, includes all the elements of Claim 10. Accordingly, Claims 2-12 are patentably distinct and non-obvious over the cited references for at least the reasons set forth above with respect to Claim 1, Claims 14-24 are patentably distinct and non-obvious over the cited references for at least the reasons set forth above with respect to Claim 13, and Claims 26-36 are patentably distinct and non-obvious over the cited references for at least the reasons set forth above with respect to Claim 25.

Thus, reconsideration of the rejections is respectfully requested.

In view of the foregoing, Applicants respectfully request that the rejection of the claims set forth in the Office Action of August 17, 2010 be withdrawn, that pending claims 1-37 be allowed, and that the case proceed to early issuance of Letters Patent in due course.

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Serial No.: 10/560,567
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Response dated: September 27, 2010

PATENT
PU030164

No fee is believed due with regard to the filing of this amendment. However, if a fee is due, please charge Deposit Account No. 07-0832.

Respectfully submitted,
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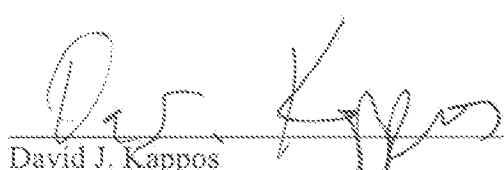
Date: September 27, 2010

Subject Matter Eligibility of Computer Readable Media

The United States Patent and Trademark Office (USPTO) is obliged to give claims their broadest reasonable interpretation consistent with the specification during proceedings before the USPTO. See *In re Zletz*, 893 F.2d 319 (Fed. Cir. 1989) (during patent examination the pending claims must be interpreted as broadly as their terms reasonably allow). The broadest reasonable interpretation of a claim drawn to a computer readable medium (also called machine readable medium and other such variations) typically covers forms of non-transitory tangible media and transitory propagating signals *per se* in view of the ordinary and customary meaning of computer readable media, particularly when the specification is silent. See MPEP 2111.01. When the broadest reasonable interpretation of a claim covers a signal *per se*, the claim must be rejected under 35 U.S.C. § 101 as covering non-statutory subject matter. See *In re Nuijten*, 500 F.3d 1346, 1356-57 (Fed. Cir. 2007) (transitory embodiments are not directed to statutory subject matter) and *Interim Examination Instructions for Evaluating Subject Matter Eligibility Under 35 U.S.C. § 101*, Aug. 24, 2009; p. 2.

The USPTO recognizes that applicants may have claims directed to computer readable media that cover signals *per se*, which the USPTO must reject under 35 U.S.C. § 101 as covering both non-statutory subject matter and statutory subject matter. In an effort to assist the patent community in overcoming a rejection or potential rejection under 35 U.S.C. § 101 in this situation, the USPTO suggests the following approach. A claim drawn to such a computer readable medium that covers both transitory and non-transitory embodiments may be amended to narrow the claim to cover only statutory embodiments to avoid a rejection under 35 U.S.C. § 101 by adding the limitation "non-transitory" to the claim. Cf. *Animals – Patentability*, 1077 Off. Gaz. Pat. Office 24 (April 21, 1987) (suggesting that applicants add the limitation "non-human" to a claim covering a multi-cellular organism to avoid a rejection under 35 U.S.C. § 101). Such an amendment would typically not raise the issue of new matter, even when the specification is silent because the broadest reasonable interpretation relies on the ordinary and customary meaning that includes signals *per se*. The limited situations in which such an amendment could raise issues of new matter occur, for example, when the specification does not support a non-transitory embodiment because a signal *per se* is the only viable embodiment such that the amended claim is impermissibly broadened beyond the supporting disclosure. See, e.g., *Gentry Gallery, Inc. v. Berkline Corp.*, 134 F.3d 1473 (Fed. Cir. 1998).

Date: 1/24/10


David J. Kappos

Under Secretary of Commerce for Intellectual Property and
Director of the United States Patent and Trademark Office